



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/502,132 | 07/20/2004 | Gerhard Schmaus | 3968-120 | 1516 |

30448 7590 04/18/2007
AKERMAN SENTERFITT
P.O. BOX 3188
WEST PALM BEACH, FL 33402-3188

| |
|----------|
| EXAMINER |
|----------|

CHONG, YONG SOO

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1617

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/18/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/502,132 | Applicant(s) SCHMAUS ET AL. | |
| | Examiner Yong S. Chong | Art Unit 1617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-22 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 9-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

This Office Action is in response to applicant's arguments filed on 3/12/2007. Claim(s) 6 has been cancelled. Claim(s) 1-5, 7-22 are pending. Claim(s) 1, 4-5, 7-8, 10-11 have been amended. Claim(s) 8 has been withdrawn. Claim(s) 1-5, 7, 9-22 are examined herein.

Applicant's amendments have rendered the 112 rejection of the last Office Action moot, therefore hereby withdrawn.

Applicant's arguments have been fully considered but found not persuasive. The rejection(s) of the last Office Action are maintained for reasons of record and modified below for Applicant's convenience.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham vs John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 1617

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5, 7, 9-22 are rejected under 35 U.S.C. 103(a) as being obvious over Clarkson et al. (US Patent Application 2001/0036964 A1) in view of Eggensperger et al. (US Patent 5,670,160), Riebel et al. (US Patent Application 2003/0100613 A1), and Cupferman et al. (US Patent Application 2002/0098211 A1).

The instant claims are directed to a synergistic anti-microbial composition comprising two or more 1,2-alkanediols and a preservative.

Clarkson et al. teach an anti-microbial composition comprising an iron (III) chelator, water, and polyhydric alcohol (abstract). The iron (III) chelators are utilized as anti-microbial agents in the composition (section 0001). Preferred polyhydric alcohols include 1,2-pentanediol, 1,2-hexanediol, and 1,2-octanediol, or mixtures thereof (section 0065) with amounts ranging from 1 to 20% by weight (section 0062). Additional anti-microbial agents (section 0077) as well as other additives (section 0087), such as preservatives (section 0088) may be added to the composition.

Generally, mere optimization of ranges will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "When the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimal or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); see also *In re Peterson*, 315 F. 3d at 1330, 65 USPQ 2d at 1382 "The normal desire of scientists or artisans to improve upon what is already generally known

Art Unit: 1617

provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages." MPEP 2114.04.

However, Clarkson et al. fail to disclose expressly a composition comprising the particular combination of alkyldiols herein or the specific preservatives such as 1,2-dibromo-2,4-dicyanobutane, 2-phenoxyethanol, and 3-iodo-2-propinyl-butyl carbamate.

Eggensperger et al. teach that 1,2-dibromo-2,4-dicyanobutane (col. 16, lines 15-20) and 2-phenoxyethanol (col. 15, lines 27-35) can be used as preservatives or biocides.

Riebel et al. teach that 3-iodo-2-propinyl-butyl carbamate can be used as a fungicide (section 0328).

Cupferman et al. disclose a novel antimicrobial composition comprising at least one polyol in combination with 2-hydroxy-4-(1-methylethyl)cyclohepta-2,4,6-trien-1-one or sodium capryl lactyl lactylate (section 0002). The polyol is disclosed to be 1,2-alkanediols (section 0005), specifically comprising 4 to 8 carbon atoms (section 0012), such as 1,2-octanediol or 1,2-pentanediol (section 0013). Furthermore, such compositions are disclosed to possess synergistic antimicrobial action (section 0008).

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed invention was made to make a synergistic composition comprising the alkyldiols herein, according to Clarkson et al. and to include 1,2-dibromo-2,4-dicyanobutane and 2-phenoxyethanol taught by Eggensperger et al. and 3-iodo-2-propinyl-butyl carbamate taught by Riebel et al. in the anti-microbial composition taught by Clarkson et al.

A person of ordinary skill in the art would have been motivated to make a synergistic composition comprising the 1,2-alkanediols herein because: (1) Clarkson et al. discloses 1,2-alkanediols for use in antimicrobial compositions and (2) Cupferman et al. discloses synergistic antimicrobial action in compositions comprising 1,2-alkanediols. Therefore, one of ordinary skill would have had a reasonable expectation of success in formulating a synergistic antimicrobial composition, as disclosed by Cupferman et al., comprising 1,2-alkanediols of different chain lengths for preserving a cosmetic or food product from microbes, bacteria, and fungi.

Examiner respectfully points out that the intended use is given no patentable weight in a composition.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish from each other. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Thus, the intended use of a composition claim will be given no patentable weight.

It is further respectfully pointed out that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand

alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). See MPEP 2111.02.

Response to Arguments

Applicant argues that the cited prior art references, particularly Cupferman et al., do not teach synergistic antimicrobial action between different straight chain 1,2-alkanediols with chain length in the range of 5 to 10 carbon atoms. Applicant also supports this conclusion by submitting Kull values to quantify the synergism.

This is not persuasive because both Clarkson and Cupferman et al. clearly disclose compositions comprising different straight chain 1,2 alkanediols. Furthermore, Cupferman et al. clearly disclose synergistic antimicrobial action in the disclosed compositions. Examiner notes that the limitations regarding K values denoting synergism are inherently met since synergism is disclosed and the fact that a composition and its properties are inseparable.

"Products of identical chemical composition can not have mutual exclusive properties." Any properties exhibited by or benefits from are not given any patentable weight over the prior art provided the composition is inherent. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the disclosed properties are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01. The burden is shifted to the applicant to show that the prior art product does not inherently possess the same properties as the instantly claimed product.

For the sake of argument, even if Cupferman et al. disclosed synergism only between a single 1,2-alkanediol and 2-hydroxy-4-(1-methylethyl)cyclohepta-2,4,6-trien-1-one or sodium capryl lactyl lactylate, the claims still would be rejected because it is obvious to combine two compositions used for the same purpose, which is for inhibiting the growth of microorganisms.

"It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... The idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong S. Chong whose telephone number is (571)-272-8513. The examiner can normally be reached on M-F, 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SREENI PADMANABHAN can be reached on (571)-272-0629. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YSC



SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER